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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,244

08/22/2006

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ZAO0101PUSA

1668

22045 7590 01/22/2009

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EXAMINER

LONG, ROBERT FRANKLIN

ART UNIT

PAPER NUMBER

3764

MAIL DATE

DELIVERY MODE

01/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,244	Applicant(s) GRIGORIEV ET AL.	
	Examiner Robert F. Long	Art Unit 3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 10/03/08 has been entered. Claims 2-16 are pending in the application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 2-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koscienly et al. (US 7153246 B2) in view of Senegal (US 20070083975 A1)**.

Regarding claims 9 and 12, a device for forced change of a user's posture and producing an increased load on the locomotor apparatus, **14**, (*Abstract, column 2, lines 49-67*) the device comprising: a pair of shoulder pads, a pelvic pad, a pair of knee pads and a pair of foot pads all interconnected by a plurality of loading elements; *the cap 14, vest 16, pant garment 18, knee supports 20 and foot supports 22, are snugly secured to the patient 12, (column 4, lines 50-67, figures 1-7)*, a breast pad arranged on

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the thoracic part of the trunk and connected to the shoulder pads by use of self-locking buckles, forming a vest tightly fitting on the user's body, *fasteners, such as **hook-and-pile fasteners 40 on one side, and similar fasteners 42** on the opposite side so that, with the **vest 16** positioned on the patient as shown in FIG. 1, the fasteners 40 are detachably secured to each other below one arm of the patient while, similarly, the fasteners 42 are detachably secured to each other around the other arm of the patient* (Abstract, column 2, lines 49-67), wherein each loading element is an inextensible adjusting band and elastic tie without residual deformation attached to the band, the tie having an initial length, *plurality of attachment strips 38 extending generally vertically along both the front and back of the vest 16 and so that the attachment strips 38 are laterally spaced from each other. Additionally, a plurality of longitudinally spaced attachment members 30, such as hooks, are secured to each attachment strip 38, (column 2, lines 66-67, column 3, lines 1-5) and each elastic band 28 preferably includes a plurality of longitudinally spaced adjustment nodes 34 which can be selectively secured to and retained by one of the attachment members 30 on either the vest 16 or pant garment 18. The multiple attachment members 30 on both the vest 16 and pant garment 18, together with the adjustable elastic bands 28, allows the vest 16 to be **adjustably secured under tension to the pant garment 18** with a wide range of variability. Consequently, by varying not only the number of bands 28, but also their attachment points between the vest 16 and pant garment 18, the posture of the patient 12 can be easily and accurately adjusted, (column 3, lines 41-49, figures 1-7) wherein both the breast and pelvis pads have sewed-in load-bearing bands with buckles for*

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interlocking of the breast pad to the pelvis pad, the pads designed so that they can be individually fitted on the user's body using of additional attachments, the adjusting bands of the loading elements rigidly attached to the front, side and rear surfaces of the breast and pelvis pads and the ends of the adjusting bands are provided with buckles and hooks; *the components, i.e. the cap 14, vest 16, pant garment 18, knee supports 20 and foot supports 22, are snugly secured to the patient 12, the neurological therapy suit 14 provides stabilization for the patient. The **elastic bands extending between the various components of the therapy suit are widely adjustable** both through the tension provided by the elastic bands as well as the position of **attachment of elastic bands on the various components to thereby achieve the desired posture and/or neurological feedback** during normal muscle movement of the patient, (column 4, lines 50-65)* and wherein the pair of knee pads are bandages that can tightly fit around a knee joint, an upper quarter of the shin-bone and a lower quarter of the hip, each knee pad having hinges arranged on the bandage in the plane of the knee joint to accommodate the adjusting band, and where the foot pads are in the form of shoes and a plurality of hinges extend from the shoes, the hinges being capable of attaching to the elastic ties, and the step between the hinges on one side of the shoe is less than 10 % of the shoe sole length, *knee support 20 is optionally secured around each knee of the patient 12. Each knee support 20 is constructed from a flexible, but non-elastic, material and includes an opening 60 which is aligned with the patient's kneecap. Fasteners 56 on one side of the knee support 20 are detachably secured with fasteners 58 on the opposite side of the knee support 20 so that the knee support 20 encircles the patient's*

knees. The fasteners 56 and 58, preferably hook-and-pile fasteners, allow the knee support 20 to be snugly secured around the patient's knees and eliminate movement of the knee support 20 relative to the patient's knees. A plurality of fasteners 30 are also secured to the knee support 20 so that the fasteners 30 are positioned in front of the patient's knees. One or more elastic bands 28 (FIG. 7) are then connected under the desired variable tension to fasteners 30 on the pant garment 18, (column 4, lines 10-26).

Koscienly fails to disclose wherein the device is additionally provided with three belts, each belt having two self-tightening locks designed to enable locating the first belt of these belts along the edges of the costal arch, the second belt on the waist and the third belt on the user's huckle-bones, each belt also having a fabric fastener on the interior surface of that part of the belt, which is arranged on the back surface of the user's body, the mating parts of the fastener located on the breast and pelvis pads; and if the tie is extended, creates a force of at least 4 kg, and where the ratio between the lengths of the adjusting band and elastic tie of each loading element being selected such that the maximum elongation of the elastic tie is at least 50 % of the initial length;

Koscienly also fails to disclose the pleats fitted with n zip fasteners (n being not less than 2), which provide n+1 standard sizes of the breast and pelvis pad.

Koscienly does teach, *the pant garment 18 positioned on the patient, the **attachment strip 166 along one side of the front panel 100 is attachably secured to its corresponding attachment strip 166 on the rear panel 102** and, likewise, the attachment strips 166 on the front panel 100 and rear panel 102 are likewise attached*

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*together. In doing so, the pant garment 18 is snugly, but detachably, secured to the patient, (column 3, lines 7-22, figures 1 and 6). Senegal also teaches a similar wearable vest type suit for modifying a human posture that has two belt webbing with a fastener located on the breast and pelvis, vest 10 can be coupled together to at least partially secure the vest on a user by mating butterfly clips 60 attached to opposite ends of the webbing and the left side ends of the **webbing 18a, 18b can have first female attachment portions 61 of clip 60** and the right side second ends can have corresponding second **male attachment portions 62** that are matingly received and secured in the first female attachments portions, respectively. To accommodate users with different body sizes and shapes, the circumferential length of **the webbing 18a, 18b can be increased or decreased by adjustably threading either the right or left side ends through a respective first male and/or second female attachment portion, respectively**, (page 13, [0051], figures 1-11).*

Senegal also teaches using a plurality of zippers as attachment means, *hook and loop fastening system is shown, in other implementations, the end portions 28, 30 can be removably attached to each other using other, or additional, fastening mechanisms, such as conventional buttons, snap buttons, **one or more zippers**, string or lace, clips or other conventional fastening mechanisms having two or more matable portions allowing for easy attachment to and detachment from each other (page 13, [0051], figures 1-11).*

Here both arts (Koscienly and Senegal) teach a wearable suit and vest with additional clothing that modify's human posture via resistance bands similar to the

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application herein. Thus, it would have been obvious for an exercise artisan to implement the two webbing belts 18/18a into Koscienny et al.'s motor therapy suit to form three belts since doing so would provide additional support, additional restraint attachment parts, and a better fitting suit. Further, it would have been obvious for an exercise artisan to add two belt straps like 166 for further adjustable fitting reasoning and/or support without the need of the teaching of Senegal. Also, for using the additional belts for adjustability purposes as seen here; it has been held adjustability, where needed, is not a patentable advance, and if an art-recognized need for adjustment the prior art would have been obvious. *In re Stevens*, 212 F.2d 197, 101 USPQ 284 (CCPA 1954).

In regards to the tension when tie is extended, creates a force of at least 4 kg, and where the ratio between the lengths of the adjusting band and elastic tie of each loading element being selected such that the maximum elongation of the elastic tie is at least 50 % of the initial length, Koscienny teaches varying the force, ***adjustable elastic bands 28, allows the vest 16 to be adjustably secured under tension to the pant garment 18 with a wide range of variability (column 3, lines 41-49).***

Here it would have also been obvious for an exercise artisan to implement the 4 kg. range of force with a maximum elongation range of 50% for the desired exercise regimen or therapy regimen. Similarly, it has been held that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773

(*Fed. Cir. 1985*) and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Also, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, (*as shown here*), a prima facie case of either anticipation or obviousness has been established, *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Moreover, it has been held to combine teachings is obvious, "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... The idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Regarding claims 10-11 and 13, Koscienny teaches a shoe is provided with a fabric strip on the perimeter, the fabric strip carrying the shoe hinges which attach to the elastic ties, wherein the shoe is a flexible fabric plate capable of embracing the entire sole of the user, the fabric plate carrying the hinges which attach to the elastic ties, wherein the shoes further comprise a plurality of hinges extending from each shoe, the hinges being capable of attaching to the elastic ties, ***shoe support 22 includes a flap and generally rigid sole support 82 which extends under the user's feet. A toe band 84 has each end secured to the sole 82 so that the toe support 82 extends across the top of the patient's foot adjacent the patient's toes. Similarly, a heel support 92 is***

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*secured to the sole 82 such that the heel support 92 extends around the patient's heel. An ankle strap 86 then extends around the patient's foot adjacent the patient's ankle and is snugly secured to the patient by a fastener 88, such as a hook-and-pile fastener, shoelaces, or any conventional fastening means. Thus, with the shoe support 22 secured to the patient's foot, movement of the shoe support 22 relative to the patient's foot is precluded. A **plurality of attachment members 30 are secured to the shoe support. Preferably, the fasteners 30 are secured to both the toe band 84 as well as to the heel support 92. Elastic bands 28 (FIGS. 1 and 7) are then secured between the attachment members 30 on the shoe support 22 and the attachment members 30 on the knee support 20 to provide the desired neurological feedback during normal movement of the patient 12,*** (column 4, lines 27-50, figures 1 and 3).

But fails to disclose the step between the hinges on one side of the shoe is less than 10 % of the shoe sole length.

Koscienly does teach **adjustable elastic bands 28, allows the vest 16 to be adjustably secured under tension** to the pant garment 18 with a wide range of variability (column 3, lines 41-49).

Here it would have also been obvious for an exercise artisan to implement the 4 kg. range of force with a maximum elongation range of 50% for the desired exercise regimen or therapy regimen. Similarly, it has been held that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773

(*Fed. Cir. 1985*) and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 14, additional attachments enabling fine individual fitting of the breast and pelvis pads of the device on the user are designed as a lacing arranged on the front and back surfaces of the pads, *the pant garment 18 positioned on the patient, the attachment strip 166 along one side of the front panel 100 is attachably secured to its corresponding attachment strip 166 on the rear panel 102 and, likewise, the attachment strips 166 on the front panel 100 and rear panel 102 are likewise attached together. In doing so, the pant garment 18 is snugly, but detachably, secured to the patient, (column 3, lines 7-22, figures 1 and 6).*

Regarding claim 16, Koscienny in view of Senegal teaches a coordinate net is applied to the surfaces of all the pads, making it possible to register the fixation points and direction of the pulling force,

Koscienny does teach obtaining feedback analysis on the pulling force, *the attachment members 30 on the shoe support 22 and the attachment members 30 on the knee support 20 to provide the desired neurological feedback during normal movement of the patient 12, (column 4, lines 42-49) and elastic bands extending between the various components of the therapy suit are widely adjustable both through the tension provided by the elastic bands as well as the position of attachment of elastic bands on the various components to thereby achieve the desired posture and/or neurological feedback during normal muscle movement of the*

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*patient, (column 4, lines 50-67). Senegal also teaches a resistance device, as used herein, can be defined as any device capable of resisting movement away from an object to which the resistance device is coupled and/or assisting movement in a desired direction or placement in a desired position. Resistance devices can be, for example, cables, cords, tubing, rope, poles, rods, sticks or **webbing anchored to one or more objects, such as a people**, weights, walls, floors and exercise equipment, et, (page 56, [0072]).*

Here both teach feedback and Senegal teaches controlling directional movement and both teach modifying human posture via a wearable vest/suit. Thus it would have been obvious for an exercise to combine the teachings for a more comprehensive training vest/suit with feedback analysis with respect to exercise and/or rehabilitation therapy.

Regarding claims 5 and 15, Koscienny in view of Senegal fails to teach a loading element is provided with a dynamometric tape to check the pulling force.

Koscienny does teach **adjustable elastic bands 28, allows the vest 16 to be adjustably secured under tension to the pant garment 18 with a wide range of variability (column 3, lines 41-49) and the straps provide the desired neurological feedback during normal movement of the patient 12, (column 4, lines 42-49).**

Thus it would have been obvious to use any type of measuring means such as a dynamometric tape to indicate the pulling force if desired for a more comprehensive feedback exercise therapy system.

Further, Here providing the dynamometric tape errs toward a method in which is also obvious steps necessary for using the apparatus for the desired measurements properly. It has been held that to be entitled to weight in method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure, *Ex parte Pfeiffer*, 1962 C.D. 408 (1961). Thus, the methods discussed with the apparatus would be obvious to the exercise artisan in order to use them correctly for the desired exercise and/or therapy. Also, in order to be given patentable weight, a functional recitation must be supported by recitation in the claim of sufficient structure to warrant the presence of functional language, *In re Fuller*, 1929 C.D. 172; 388 O.G. 279.

Regarding claims 2-8, These dependent claims cover the same subject matter, despite a slight difference in wording, and are being substantially close enough to the prior claims that the cited reference notes to those claims cover this subject matter as well.

Response to Arguments

4. Applicant's arguments with respect to claims 2-16 have been considered but are moot in view of the new ground(s) of rejection of newly cited art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing related limitations of the applicant's claimed and disclosed invention: **Romney (US 5308305 A)**, **Pryor (US 20060033713 A1)**, **MARSHMAN (US 2097376 A)**, **LADDIE (US 3162442**

A), STEVENS (US 3295517 A), Name (US 0807908 A), Koscielny et al. (US 7153246 B2), Longo (US 20070213186 A1), Seles (US 20030045408 A1), Matsuoka (US 20030027698 A1) and (US 4658442 A).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert F. Long whose telephone number is (571)270-3864. The examiner can normally be reached on 5-4-9 (7:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Thanh can be reached on (571) 272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert F Long/
Examiner, Art Unit 3764
Thursday, January 08, 2009

/Fenn C Mathew/
Primary Examiner, Art Unit 3764